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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,005	09/29/2000	NAOJI OTSUKA	684.3082	2049

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EXAMINER

NGUYEN, LAMSON D

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 07/17/2002

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/675,005

Applicant(s)
Otsuka et al.

Examiner
Lamson Nguyen

Art Unit
2861



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22, 25, and 26 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-22, 25, and 26 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5, 9 6) ☐ Other:

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DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of Group I, claims 1-22, 25-26 in Paper No. 7 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 8, 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin (EP0300743A2).

Lin, admitted prior art, teach a printing method by a printing apparatus comprising:

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* forming a color image by applying different color inks to a printing medium while directionally moving the head (figures 6a-b, 7a-b)

* changing means for changing order of applications of the inks to be applied for printing a secondary color (figures 6-7 teach order of ejecting cyan and magenta changes depending on the direction of scanning)

* forming means for forming the secondary color while making the order of the applications of the inks to at least one of a plurality of the secondary color pixel areas different from the order of another (figures 6-7)

* changing the order for substantially half number of the secondary pixel areas (figures 7a-b)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 3, 9-13, 15-16, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of Brown (6,273,550).

Lin teaches all claimed features of the instant invention with the exception of:

- * one or more sets of recording elements for application of color ink, the recording elements constituting the set being arranged in the scanning direction symmetrically so that the orders of applications of the inks applied to the pixel area are different from the order of another

- * two sets of recording elements

Brown teaches a printhead having two sets of recording elements arranged symmetrically in the scanning direction so that the orders of applications of the color inks are different from one another (figure 4a).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Lin to incorporate the teaching of different orders of ink applications taught by Brown for the purpose of minimizing chromatic variations.

6. Claims 4-7, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of Brown as applied to claim 3 above, and further in view of Asauchi et al. (6,302,508).

Lin in view of Brown teaches all claimed features of the invention except:

- * print buffers for storing print data

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* centers of gravity of dots are substantially aligned with each other

It is well-known in the art of ink jet printers to utilize print buffers, as taught by Asauchi et al. (figure 1). Asauchi et al. also teach centers of gravity of the dots aligned with each other (figure 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Lin in view of Brown to incorporate the teaching of print buffers and aligned centers of gravity of ink drops taught by Asauchi et al. for the purpose of storing print data and reducing print unevenness.

7. Claims 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Asauchi.

Brown teaches all claimed features of the invention except:

* print buffers

Asauchi teaches print buffers (figure 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Brown to incorporate the teaching of print buffers taught by Asauchi for the purpose of storing print data.

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8. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin in view of Kanda (6,382,765).

Lin teaches all claimed features of the invention except:

* the apparatus is incorporated into a copying machine having a scanner and a facsimile machine

It is well-known in the art of printing to incorporate an ink jet printhead into a copying machine or a facsimile machine as taught by Kanda. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the invention of Lin to incorporate the teaching of copier and facsimile machine taught by Kanda for the purpose of achieving multi-purpose printing apparatus.

Allowable Subject Matter

9. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamson D. Nguyen whose telephone number is (703)306-4547.

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A handwritten signature in black ink, appearing to read 'Lamson Nguyen', with a large, stylized loop at the end.

LDN

**LAMSON NGUYEN
PRIMARY EXAMINER**